

In the Claims:

Please amend the claims as follows (the changes in these Claims are shown with strikethrough for deleted matter and underlines for added matter). A complete listing of the claims proper claim identifiers is set forth below.

Amendments to the Claims

1. (Currently Amended) A liquid crystal display device, comprising:

a plurality of gate lines formed on a first substrate along a transverse direction, each gate line including a gate electrode;

a first insulating layer formed on the first substrate to cover the gate lines and the gate electrodes;

a plurality of data lines formed on the first insulating layer along a longitudinal direction, the data lines defining a plurality of pixel regions with the gate lines and each including a source electrode;

a thin film transistor formed at a crossing region of each of the gate and data lines, each thin film transistor including one of the gate electrodes, a semiconductor layer, one of the source electrodes, and a drain electrode;

a color filter over the first insulating layer in each pixel region, each color filter having one of red, green or blue colors, the color filters having a plurality of drain contact holes exposing the drain electrodes, each color filter having a first top surface;

a pixel electrode formed directly on the first top surface in each pixel region, each pixel electrode contacting one of the drain electrodes through the drain contact hole, wherein a portion of the pixel electrode in the drain contact hole contacts the color filter defining the drain contact hole;

a common electrode on a second substrate, the common electrode facing the first substrate;

a liquid crystal layer interposed between the common electrode and the pixel electrodes.

a plurality of transparent layers including light-shielding color filter patterns, only the plurality of transparent layers without any black matrix filling a space between the thin film transistor and the liquid crystal layer, the light-shielding color filter

patterns including at least two of red, green or blue color resins, the light-shielding color filter patterns having a second top surface,

wherein a thickness of the light-shielding color filter patterns is equal to or less than a thickness of the color filter,

wherein the first and second top surfaces face the common electrode and have the same level, and

wherein the light-shielding color filter patterns are formed of the same material as the color filters.

2. (Previously Presented) The device according to claim 1, wherein each semiconductor layer includes an active layer of amorphous silicon and an ohmic contact layer of doped amorphous silicon, wherein the source and drain electrodes are formed on the ohmic contact layer and spaced apart from each other, and wherein each thin film transistor includes a channel on the active layer between the source and drain electrodes.

3-5. (Cancelled)

6. (Previously Presented) The device according to claim 1, wherein a cell gap between the light-shielding color filter patterns and the common electrode is greater than zero.

7. (Original) The device according to claim 1, wherein the color filters are formed of a photosensitive resin through a photolithography process.

8. (Previously Presented) The device according to claim 1, wherein red, green and blue color filters are formed sequentially on the first substrate.

9. (Original) The device according to claim 1, wherein each of red, green and blue color filter patterns has a thickness smaller than each of red, green and blue color filters.

10. (Original) The device according to claim 1, wherein each light-shielding color filter pattern has a red color filter pattern, a green color filter pattern and a blue color filter pattern.

11. (Original) The device according to claim 1, further comprising a second insulating layer between the thin film transistors and the light-shielding patterns and between the first insulating layer and the color filters, wherein the second insulating layer covers the source electrodes, the drain electrodes and the data lines and wherein the drain contact holes extend through the second insulating layer.

12. (Original) The device according to claim 1, further comprising a third insulating layer between the color filters and the pixel electrodes, wherein the third insulating layer covers the color filters and the light-shielding color filter patterns.

13. (Previously Presented) The device according to claim 1, wherein a portion of each gate line acts as a first capacitor electrode, wherein the liquid crystal display device further comprises a second capacitor electrode on the first insulating layer over each portion of the gate line, wherein each second capacitor electrode and portion of the gate line constitute a storage capacitor with the first insulating layer interposed between the portion of the gate line and the second capacitor electrode, wherein each color filter includes a capacitor contact hole exposing the second capacitor electrode, and wherein the pixel electrodes contact the second capacitor electrodes through the capacitor contact holes.

14-17. (Canceled)

18. (Currently Amended) A method of fabricating a liquid crystal display device, comprising:

forming a plurality of gate lines on a first substrate along a transverse direction, each gate line including a gate electrode;

forming a first insulating layer on the first substrate to cover the gate lines and the gate electrodes;

forming a plurality of data lines on the first insulating layer along a longitudinal direction, the data lines defining a plurality of pixel regions with the gate lines and each including a source electrode;

forming a thin film transistor formed at a crossing region of each of the gate and data lines, each thin film transistor including one of the gate electrodes, a semiconductor layer, one of the source electrodes, and a drain electrode;

forming a color filter over the first insulating layer in each pixel region, each color filter having one of red, green or blue colors and a drain contact hole exposing the drain electrode, each color filter having a first top surface;

forming a pixel electrode directly on the first top surface in each pixel region, each pixel electrode contacting one of the drain electrodes through the drain contact hole, wherein a portion of the pixel electrode in the drain contact hole contacts the color filter defining the drain contact hole;

forming a common electrode on a second substrate, the common electrode facing the first substrate;

forming a liquid crystal layer between the common electrode and the pixel electrodes; and

forming a plurality of transparent layers including light-shielding color filter patterns, only the plurality of transparent layers without any black matrix filling a space between the thin film transistor and the liquid crystal layer, the light-shielding color filter patterns including at least two of red, green or blue color resins, the light-shielding color filter patterns having a second top surface,

wherein a thickness of the light-shielding color filter patterns is equal to or less than a thickness of the color filter, and

wherein the first and second top surfaces face the common electrode and have the same level.

19. (Previously Presented) The method according to claim 18, wherein each semiconductor layer includes an active layer of amorphous and an ohmic contact layer

of doped amorphous silicon, wherein the source and drain electrodes are formed on the ohmic contact layer and spaced apart from each other, and wherein forming each thin film transistor includes forming a channel on the active layer between the source and drain electrodes.

20-21. (Canceled)

22. (Original) The method according to claim 18, wherein forming the light-shielding color filter patterns includes forming the light-shielding color filter patterns at the same time and using the same material as the color filters.

23. (Previously Presented) The method according to claim 18, wherein forming the liquid crystal layer includes forming a cell gap that is greater than zero between the light-shielding color filters pattern and the common electrode.

24. (Original) The method according to claim 18, wherein each color filter is formed of a photosensitive resin through a photolithography process.

25. (Previously Presented) The method according to claim 18, wherein forming each color filter includes forming red, green and blue color filters sequentially from the semiconductor layers towards the liquid crystal layer on the substrate.

26. (Original) The method according to claim 25, wherein forming each light-shielding color filter pattern includes forming red, green and blue color filter patterns using a diffraction exposure method such that the red, green and blue color filter patterns have a thickness smaller than each of the red, green and blue color filters.

27. (Original) The method according to claim 18, wherein each light-shielding color filter pattern has a red color filter pattern, a green color filter pattern and a blue color filter pattern.

28. (Original) The method according to claim 18, further comprising forming a second insulating layer between the thin film transistors and the light-shielding patterns and between the first insulating layer and the color filters, wherein the second insulating layer covers the source electrodes, the drain electrodes and the data lines.

29. (Original) The method according to claim 28, further comprising etching an exposed portion of the second insulating layer such that the drain contact holes extend through the second insulating layer to expose a portion of each drain electrode.

30. (Original) The method according to claim 18, further comprising forming a third insulating layer between the color filters and the pixel electrodes, wherein the third insulating layer covers the color filters and the light-shielding color filter patterns.

31. (Original) The method according to claim 30, further comprising etching a portion of the third insulating layer corresponding to the drain contact holes such that the drain contact holes extend through the third insulating layer to expose a portion of each drain electrode.

32. (Original) The method according to claim 18, wherein a portion of each gate line acts as a first capacitor electrode.

33. (Original) The method according to claim 32, further comprising forming a second capacitor electrode on the first insulating layer over each portion of the gate line, wherein the second capacitor electrode and the portion of the gate line constitute a storage capacitor with the first insulating layer interposed between the portion of the gate line and the second capacitor electrode.

34. (Original) The method according to claim 33, wherein each color filter includes a capacitor contact hole exposing one of the second capacitor electrodes and wherein the pixel electrodes contacts the second capacitor electrodes through the capacitor contact holes.

35. (Currently Amended) A method of fabricating an array substrate for use in a liquid crystal display device, comprising:

forming a plurality of gate lines and a plurality of gate electrodes on a substrate, the gate lines disposed along a transverse direction and the gate electrodes extending from the gate lines;

forming a first insulating layer on the substrate to cover the gate lines and the gate electrodes;

forming active layers of amorphous silicon and ohmic contact layers of doped amorphous silicon on the first insulating layer, each active layer and ohmic contact layer disposed above one of the gate electrodes;

forming a plurality of data lines, a plurality of source electrodes and a plurality of drain electrodes, the data lines defining pixel regions with the gate lines, wherein the source and drain electrodes contact the ohmic contact layers and are spaced apart from each other, and wherein the source electrodes extend from the data lines, thereby completing a thin film transistor at a crossing of each of the gate and data lines;

forming a red color filter in a red pixel region and a red color filter pattern over each thin film transistor;

forming a green color filter in a green pixel region and a green color filter pattern over each thin film transistor;

forming a blue color filter in a blue pixel region and a blue color filter pattern over each thin film transistor, each of the red, green and blue color filters having a first top surface; and

forming a pixel electrode in each of the pixel regions directly on the first top surface of each of the red, green and blue color filters, wherein the pixel electrode contacts the drain electrode through a drain contact hole of each of the red, green and blue color filters exposing the drain electrode, and wherein a portion of the pixel electrode in the drain contact hole contacts each of the red, green and blue color filters defining the drain contact hole;

wherein forming the red, green or blue color filters forms a light-shielding color filter pattern consisting of at least two of the red, green or blue color filter patterns, and a space between the thin film transistor and the pixel electrode is filled by only a plurality of transparent layers, including the light-shielding color filter patterns, without any black matrix, the light-shielding color filter patterns having a second top surface,

wherein the space between the thin film transistor and a liquid crystal disposed on the substrate is filled by the plurality of transparent layers,

wherein a thickness of the light-shielding color filter patterns is equal to or less than a thickness of the color filter, and

wherein the first and second top surfaces face the pixel electrode and have the same level.

36-45. (Canceled)

46. (Currently Amended) A liquid crystal display device, comprising:

a plurality of gate lines formed on a first substrate along a transverse direction, each gate line including a gate electrode;

a first insulating layer formed on the first substrate to cover the gate lines and the gate electrodes;

a plurality of data lines formed on the first insulating layer along a longitudinal direction, the data lines defining a plurality of pixel regions with the gate lines, each data line including a source electrode;

a plurality of thin film transistors formed at a crossing region of the gate and data lines, the thin film transistors each including the gate electrode, a semiconductor layer, the source electrode, and a drain electrode;

a plurality of pixel electrodes formed on the first substrate in the pixel regions and contacting the drain electrodes;

a common electrode on a second substrate, the common electrode facing the first substrate;

a liquid crystal layer interposed between the common electrode and the pixel electrodes;

a plurality of color filters disposed on one of the first and second substrates in the pixel regions, each color filter having a first top surface, each color filter containing one of red, green and blue color resins such that the plurality of pixel electrodes are formed directly on the first top surfaces of the plurality of color filters; and

a plurality of transparent layers including light-shielding color filter patterns disposed on the one of the first and second substrates such that the light-shielding color filter patterns cover the semiconductor layers to shield the semiconductor layers from incident light, each light-shielding color filter pattern including at least two of the red, green or blue color resins which are disposed sequentially between the semiconductor layer and the second substrate, the light-shielding color filter patterns including a second top surface,

wherein only the plurality of transparent layers without any black matrix fill a space between the plurality of thin film transistors and the liquid crystal layer,

wherein a thickness of the light-shielding color filter patterns is equal to or less than a thickness of the color filter,

wherein the first and second top surfaces face the common electrode and have the same level, and

wherein the pixel electrode contacts the drain electrode through a drain contact hole of the color filter exposing the drain electrode, wherein a portion of the pixel electrode in the drain contact hole contacts the color filter defining the drain contact hole.

47-59. (Cancelled)